Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for implementing distribution of link state information in an optical network, comprising the steps of:

A. determining information of each link protection attribute section included in a Traffic Engineering (TE) link;

B. carrying the information of each link protection attribute section included in the TE link in a customized Type Length Value (TLV), respectively;

C. distributing the TLV in the optical network via Traffic Engineering Link State Advertisement (TE LSA).

2. (currently amended) The method for implementing distribution of link state information in an optical network according to claim 1, wherein the step of determining information of each link protection attribute section included in a TE link further includes the step of:

determining the number of link protection attribute section structures for the TE Link and information of each link protection attribute section carried in each link protection attribute section structure, in accordance with the subscriber configuration on the link.

3. (original) The method for implementing distribution of link state information in an optical network according to claim 1, wherein the information of each link protection attribute section comprises:

protection type of the section and/or information of bandwidth resource occupied by the section.

4 (currently amended) The method for implementing distribution of link state information in an optical network according to claim 1, 2 or 3, wherein the step of carrying the

Appl. No. To Be Assigned
Amdt. dated September 21, 2006
Preliminary Amendment

PATENT

information of each link protection attribute section included in the TE link in a customized Type Length Value (TLV) respectively further includes the step of:

carrying the information of each link protection attribute section on the TE link in a field of link protection attribute section structure of the customized TLV.

5. (original) The method for implementing distribution of link state information in an optical network according to claim 4, wherein the customized TLV further comprises:

a field for the number of link protection attribute section structures, which is used to carry the number of the link protection attribute section structures divided from bandwidth resource in accordance with the subscriber configuration on the link;

a field for the offset of link protection attribute section structures, which is used to carry an offset from the start of TLV structure to the link protection attribute section information; wherein an offset pointer points to link protection attribute section structure sequence which is used to carry the information of each link protection attribute section.

6. (original) The method for implementing distribution of link state information in an optical network according to claim 5, wherein the section protection types include:

Extra, Unprotected, Shared, Dedicated 1:1, Dedicated 1+1 and Enhanced.

7. (original) The method for implementing distribution of link state information in an optical network according to claim 6, wherein the information for bandwidth resource occupied by the section comprises:

the minimum bandwidth supported by the section and bandwidth resource occupied by the section.

8. (new) The method for implementing distribution of link state information in an optical network according to claim 2, wherein the step of carrying the information of each link protection attribute section included in the TE link in a customized Type Length Value (TLV) respectively further includes the step of:

Appl. No. To Be Assigned
Amdt. dated September 21, 2006
Preliminary Amendment

PATENT

carrying the information of each link protection attribute section on the TE link in a field of link protection attribute section structure of the customized TLV.

9. (new) The method for implementing distribution of link state information in an optical network according to claim 3, wherein the step of carrying the information of each link protection attribute section included in the TE link in a customized Type Length Value (TLV) respectively further includes the step of:

carrying the information of each link protection attribute section on the TE link in a field of link protection attribute section structure of the customized TLV.